

Amnon Yariv

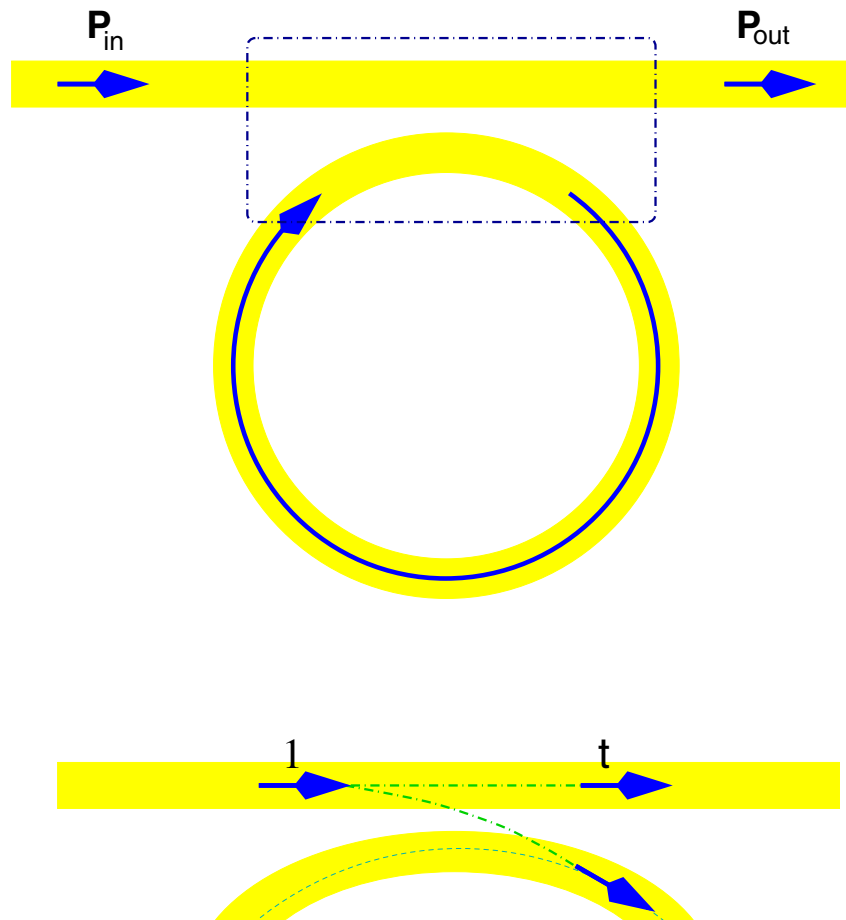
California Institute of Technology
Pasadena, California
DARPA/MTO Workshop

**Voltage Controlled Micro
Cavity-waveguide Coupling for
Switching, Routing, and Modulation
of Optical Waves**

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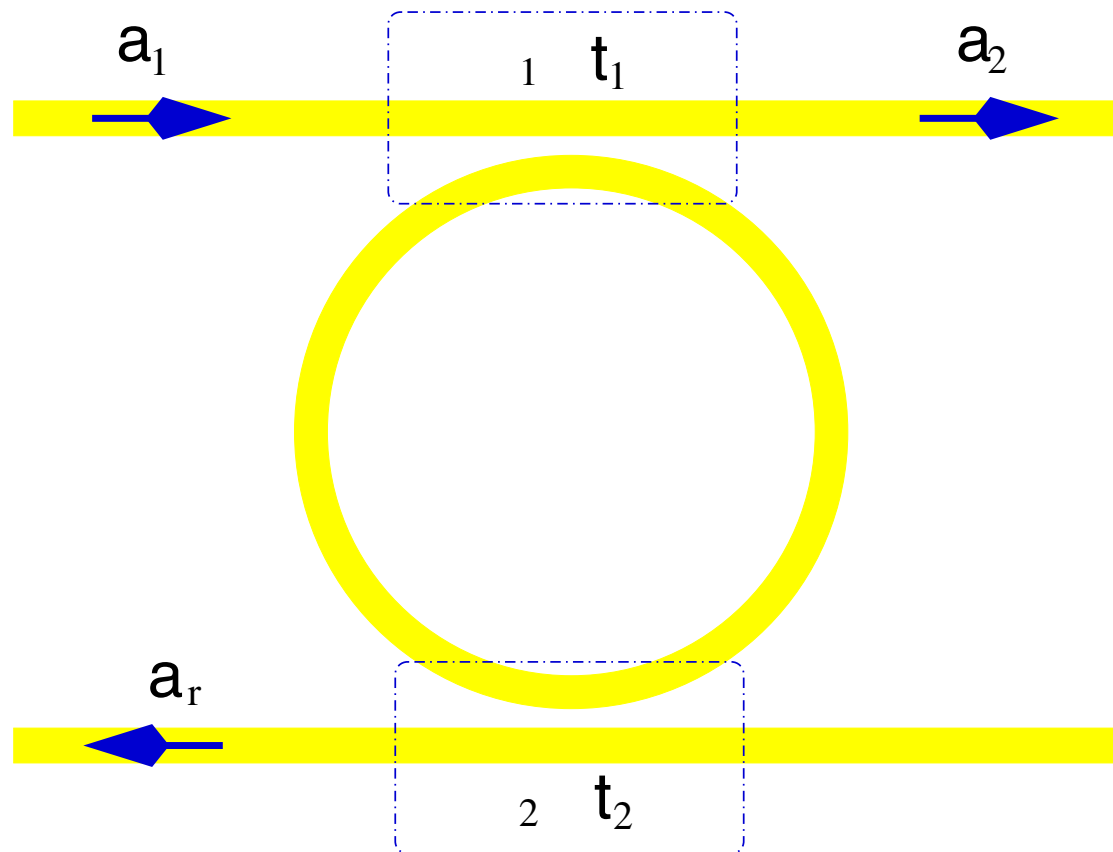
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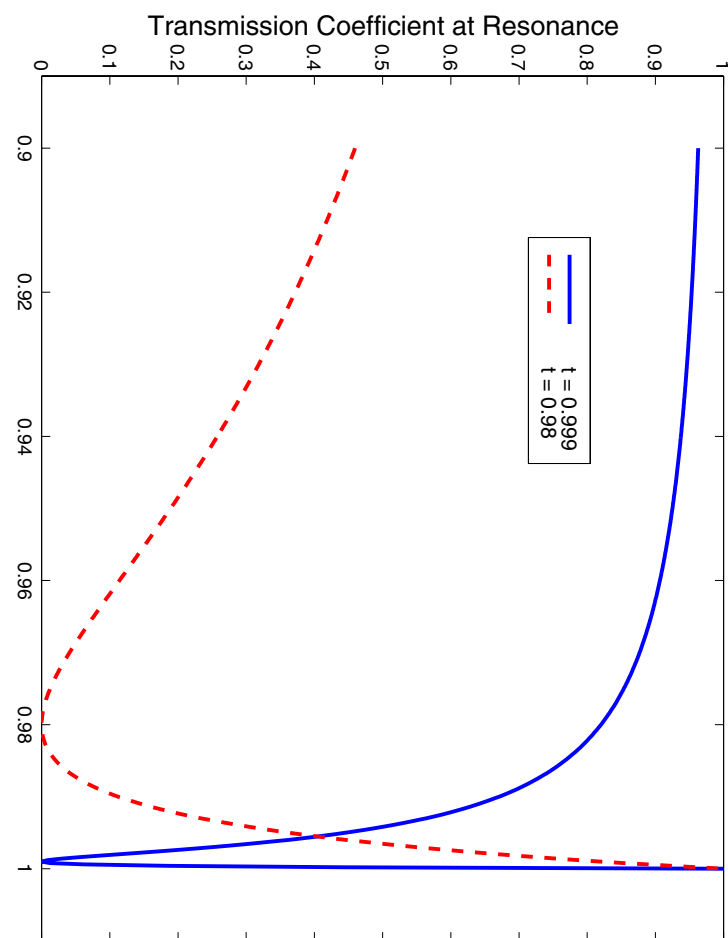
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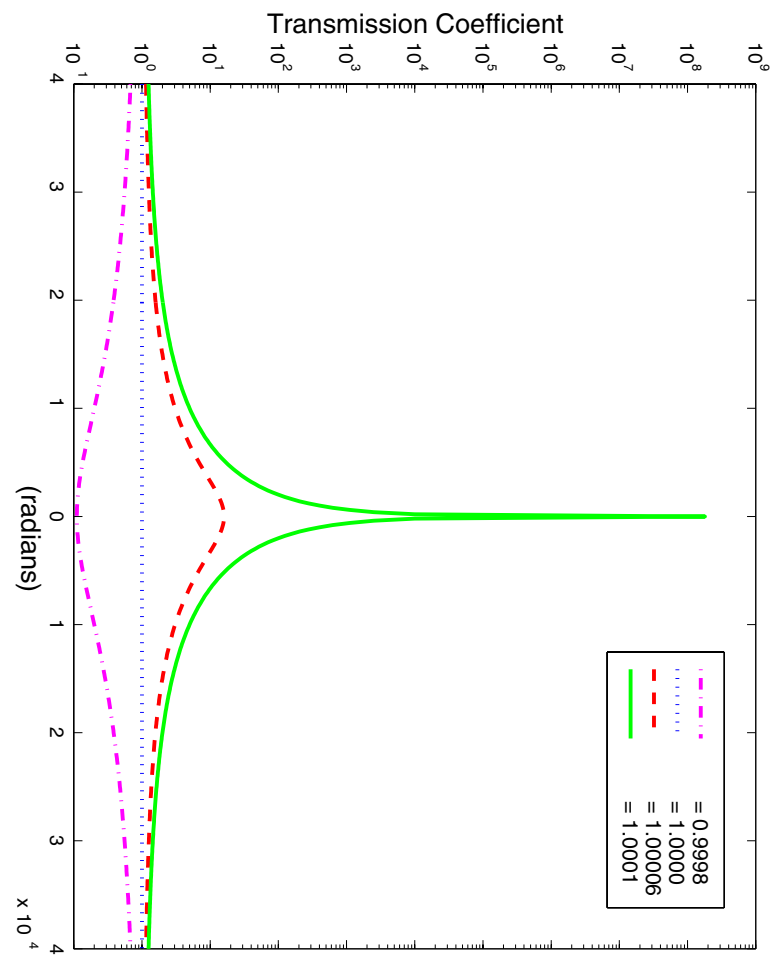
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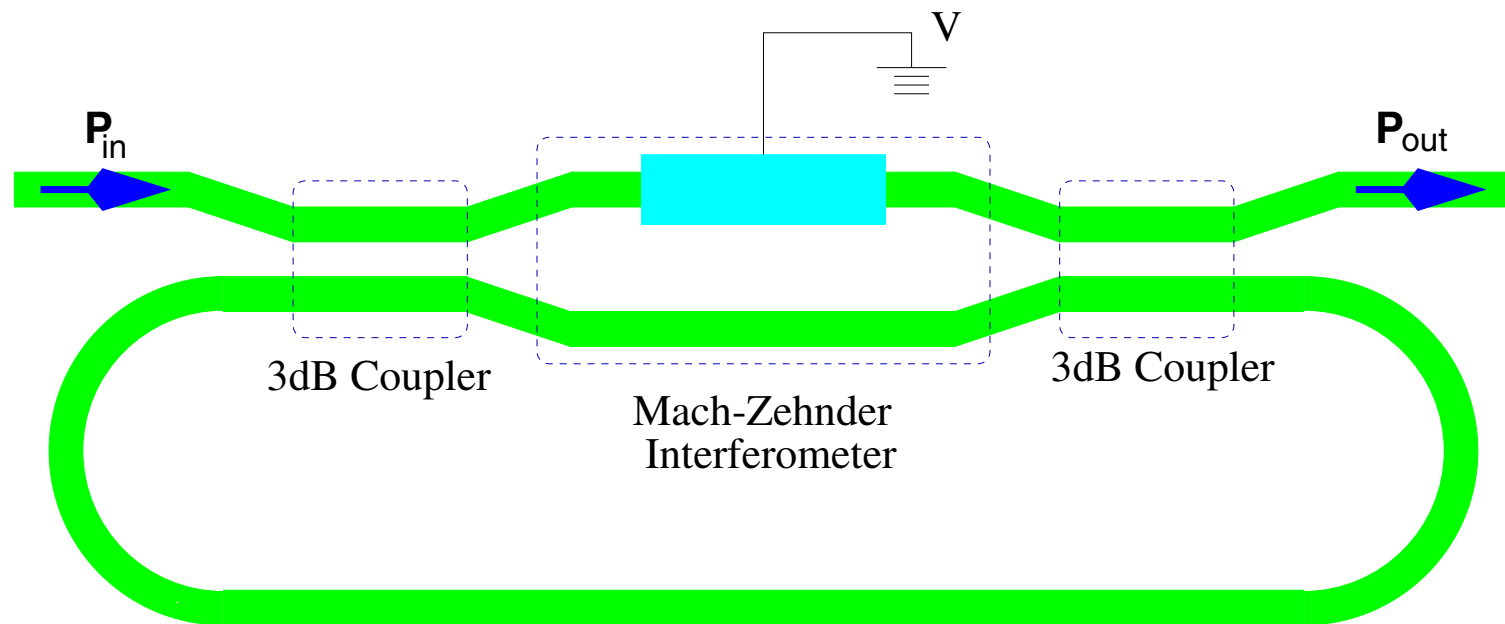
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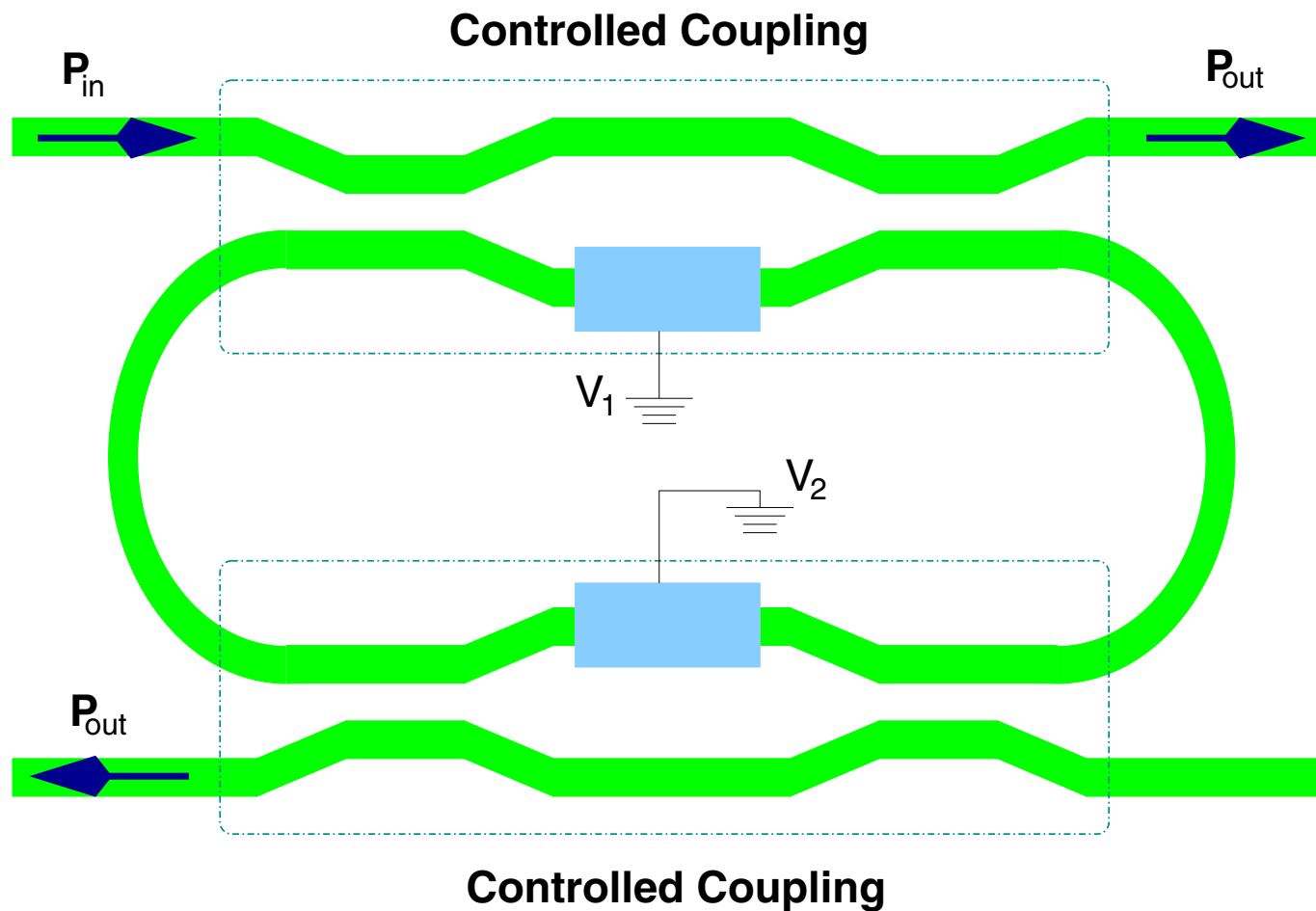
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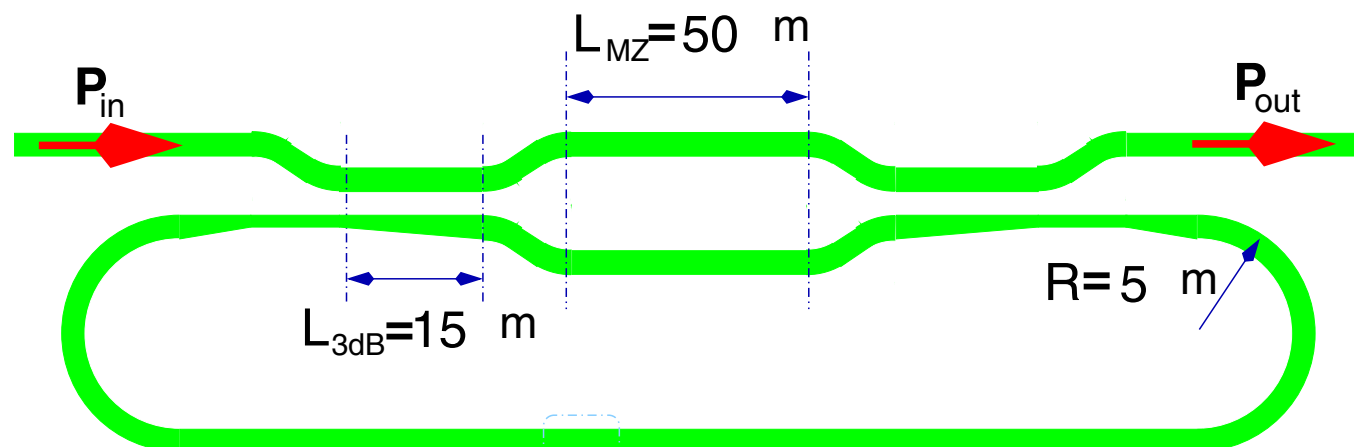
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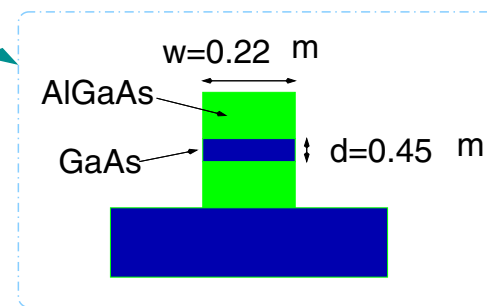
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SemiConductor Ring Resonator

THz



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Highly efficient optical power transfer to whispering-gallery modes by use of a symmetrical dual-coupling configuration

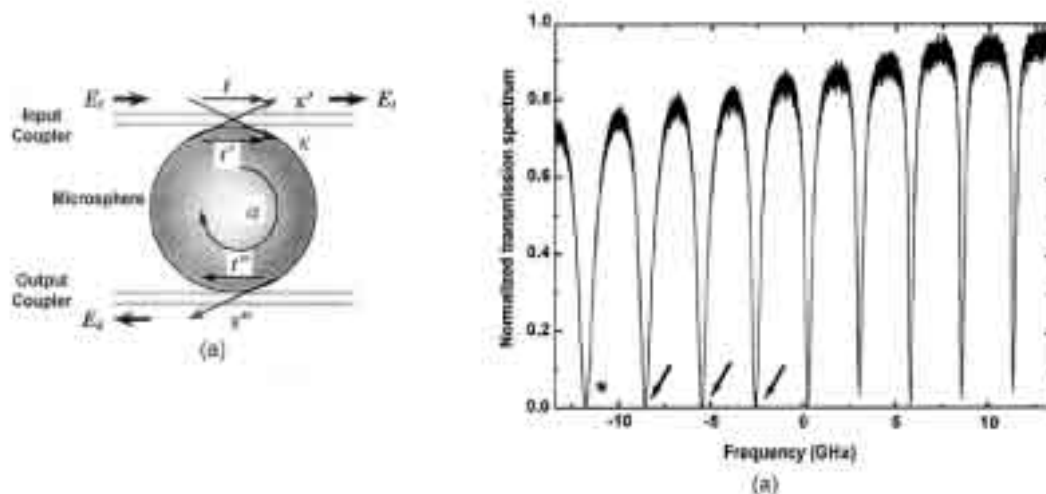
Ming Cai and Kerry Vahala

Department of Applied Physics, California Institute of Technology, Pasadena, California 91125

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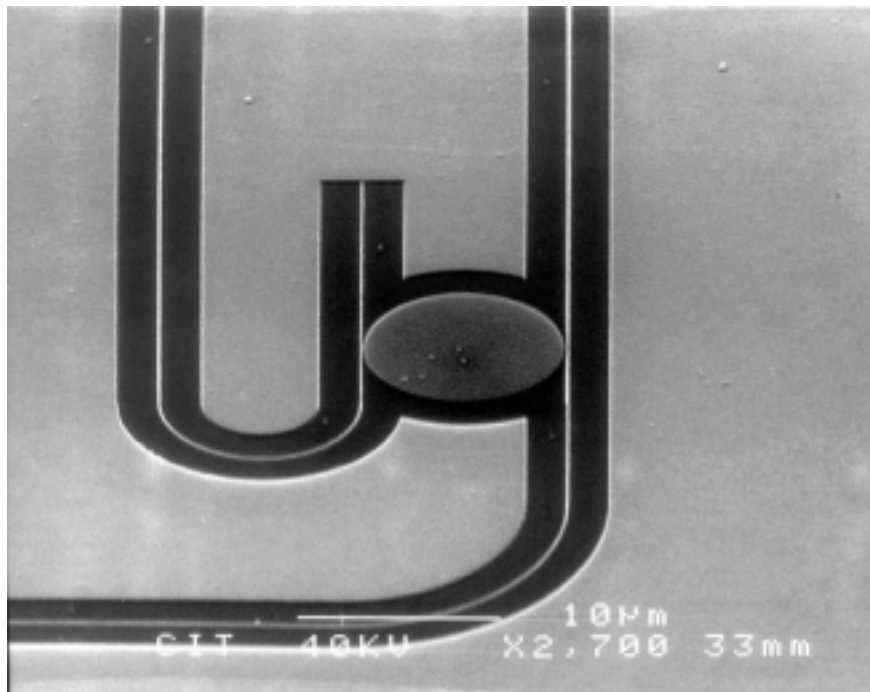
We report that greater than 99.8% optical power transfer to whispering-gallery modes was achieved in fused-silica microspheres by use of a dual-tapered-fiber coupling method. The intrinsic cavity loss and the taper-to-sphere coupling coefficient are inferred from the experimental data. It is shown that the low intrinsic cavity loss and the symmetrical dual-coupling structure are crucial for obtaining the high coupling efficiency. © 2000 Optical Society of America

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